

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1-19. (canceled)

20. (currently amended) A method of passively aligning optical elements comprising:

aligning and securing one or more optical elements to bases using one or more first flexible gripping elements on the bases, each first flexible gripping element comprising a pair of first side walls formed on the base, the pair of first side walls having generally flat surfaces spaced apart to define a first channel for receiving the optical element, a base width of the first channel being larger than a top width of the first channel so that the first side walls secure the optical element to the base; and

securing and passively aligning one or more of the bases to a substrate using one or more second flexible gripping elements on the substrate, each second flexible gripping element comprising a pair of second side walls formed on the substrate, the pair of second side walls having generally flat surfaces spaced apart to define a second channel for receiving the base, a base width of the second channel being larger than a top width of the second channel so that the second side walls secure the base to the substrate.

21-24. (cancelled)

25. (currently amended) The method of claim [[23]] 20, wherein the bases are sized and shaped such that they are interchangeable in each of the second flexible gripping elements.

26. (previously presented) The method of claim 20, wherein securing and passively aligning one or more of the bases comprises disposing at least a portion of the base in a depression in the substrate.

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27. (previously presented) The method of claim 20, wherein the first and second flexible gripping elements and bases have predetermined and standardized sizes and features.

28. (currently amended) An apparatus for passively aligning optical elements, comprising:
one or more bases, each base having a first flexible gripping element configured to secure an optical element to the base, each first flexible gripping element comprising a pair of first side walls formed on the base, the pair of first side walls having generally flat surfaces spaced apart to define a first channel for receiving the optical element, a base width of the first channel being larger than a top width of the first channel so that the first side walls secure the optical element to the base; and

a substrate having one or more second flexible gripping elements at predetermined locations, each second flexible gripping element configured to secure and passively align one of the bases to the substrate, each second flexible gripping element comprising a pair of second side walls formed on the substrate, the pair of second side walls having generally flat surfaces spaced apart to define a second channel for receiving the base, a base width of the second channel being larger than a top width of the second channel so that the second side walls secure the base to the substrate.

29. (previously presented) The apparatus of claim 28, wherein the first flexible gripping element secures the optical element to the base at a predetermined spatial and angular position.

30. (previously presented) The apparatus of claim 28, wherein the first flexible gripping element aligns the optical element to the base.

31-32. (cancelled)

33. (currently amended) The apparatus of claim 32, wherein the second sidewalls include upper and lower portions and spacing between the upper portions is less than spacing between the lower portions.

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34. (previously presented) The apparatus of claim 28, wherein the base further includes an alignment feature which cooperates with an alignment feature on the second flexible gripping element, thereby securing the base to the substrate.

35. (previously presented) The apparatus of claim 34, wherein the alignment feature includes a groove.

36. (previously presented) The apparatus of claim 28, wherein the second flexible gripping element includes a recess located in a surface of the substrate for receiving at least a portion of the base.

37. (previously presented) The apparatus of claim 28, wherein the bases are sized and shaped such that the bases are interchangeable in each of the second flexible gripping elements.

38. (previously presented) The apparatus of claim 28, wherein the flexible gripping elements and bases have predetermined and standardized sizes and features.

39. (currently amended) An optical device, comprising:
a plurality of optical elements;
a plurality of bases having first flexible gripping elements configured to secure the optical elements to the base, each first flexible gripping element comprising a pair of first side walls formed on the base, the pair of first side walls having generally flat surfaces spaced apart to define a first channel for receiving the optical element, a base width of the first channel being larger than a top width of the first channel so that the first side walls secure the optical element to the base; and

a substrate having a plurality of second flexible gripping elements at predetermined locations, the second flexible gripping elements configured to secure and passively align the bases to the substrate, each second flexible gripping element comprising a pair of second side walls formed on the substrate, the pair of second side walls having generally flat surfaces spaced apart to define a second channel for receiving the base, a base width of the second channel being

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larger than a top width of the second channel so that the second side walls secure the base to the substrate.

40. (previously presented) The apparatus of claim 39, wherein the optical elements are selected from a group consisting of optical fibers, lensed fibers, prisms, filters, thin film filters, switching elements, lenses, graded index lenses, gratings, mirrors, MEMs mirrors, electroholographic switches, VCSEL arrays, variable optical attenuation elements, tunable filters and LCD switches.